

REMARKS

I. Status and Disposition of the Claims

Claims 1-40, 46, 63-65, 80-86, 90 and 91, are pending and stand rejected. No claims are amended herein.

II. Priority Claim

The Examiner states that Applicant's letter of April 14, 2008, submitted in U.S. Provisional Application No. 60/459,259 "regarding translation of provisional application does not identify the provisional application number." July 9, 2008, Office Action at 2. In response, Applicant files concurrently herewith a certified English language translation of U.S. Provisional Application No. 60/459,259 in that application, including a cover sheet identifying the provisional application by number. A copy of the "Submission of English Language Translation of Provisional Application Under 37 C.F.R. § 1.52(d)(2)" coversheet is provided to the Examiner with the present filing. In view of the submission, Applicant believes that the claim of priority is perfected.

III. Rejection of Claims under § 103(a)

The Examiner rejects claims 1-40, 46, 63-65, 80-86, and 90-91 as "unpatentable over" the combination of U.S. Patent No. 6,113,881 to Bhatt et al. ("Bhatt"), U.S. Patent No. 5,527,840 to Chutko et al. ("Chutko"), and U.S. Patent No. 5,807,937 to Matyjaszewski et al. ("Matyjaszewski") for the reasons set forth at pages 2-4 of the Office Action. In particular, the Examiner first alleges that Bhatt teaches that film

forming resins or polymers are well known for use in styling composition. *See July 9, 2008, Office Action at 2-3.* Additionally, the Examiner contends that Bhatt also teaches the use of terpolymers (polymers constructed from more than two different types of monomeric units) in styling compositions. *See id. at 3.* However, the Examiner admits that Bhatt does not teach the claimed species in compositions for cosmetic use. *See id.*

In order to attempt to cure this deficiency, the Examiner relies on Chutko. Specifically, the Examiner alleges that Chutko "teaches the claimed species as a film forming agent in coating," although the Examiner also later admits that Chutko "does not state that the polymer is a gradient polymer [as] claimed in the instant application." *Id.* The Examiner also alleges that Chutko sufficiently teaches compositions that meet many of the other limitations of the present claims, such as weight percent of copolymer in the compositions, glass transition temperature of the copolymer, molecular weight of the copolymer, the use of a hydrophilic monomeric residue and the use of water as a solvent. *See id.*

Finally, the Examiner points to Matyjaszewski as teaching polymers, including gradient polymers, formed by atom transfer radical polymerization and that these polymers can be used in hair care products. *See id.* Based on these contentions, the Examiner thus asserts that it would be obvious "to prepare compositions of [Bhatt] and . . . substitute the film formers of [Bhatt] with [the] film formers of [Chutko] . . . and prepare the polymers by ATRP instead of conventional polymerization." *Id. at 4.*

Applicant respectfully disagrees and traverses this rejection for at least the following reasons.

In making a rejection under 35 U.S.C. § 103, the Examiner “bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. See M.P.E.P. § 2142. In its decision in *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 8 U.S.P.Q.2d 1385 (2007), the Supreme Court confirmed that the “framework for applying the statutory language of § 103” was still based on its decision in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 148 U.S.P.Q. 459 (1966). Under *Graham*, there are four factors for consideration when determining whether an invention is obvious:

- (1) the scope and content of the prior art;
- (2) the differences between the prior art and the claims at issue;
- (3) the level of ordinary skill in the art; and
- (4) secondary considerations

383 U.S. at 17, 148 U.S.P.Q. at 467. However, the Court indicated that there is no necessary inconsistency between the idea underlying the teaching, suggestion, or motivation (“TSM”) test and the *Graham* analysis. *KSR*, 127 S. Ct. at 1741, 82 U.S.P.Q.2d at 1389. As long as the TSM test is not applied as a “rigid and mandatory” formula, the test can provide “helpful insight” to an obviousness inquiry. *Id.*

Here the Examiner points to three pieces of prior art as allegedly disclosing every element of the present claims. However, the Examiner does not give weight to the significant differences between these prior art references and the present claims, nor does the Examiner appreciate how the prior art references, when read as a whole, actually teach away from combining them in a way that might allegedly lead to the present invention.

Bhatt discloses compositions that can be used as hairstyling aids that contain carboxylated polyurethane resin. *See* Bhatt, col. 6, lines 61-63. These polymers are claimed to be superior to the resins of the similar prior art compositions. Particularly, Bhatt points out the limitations of resins containing *vinyl or acrylic copolymers*. *See id.* at col. 3, line 44 - col. 4, line 11. According to Bhatt, unless those prior art resins are used in combination with a polyurethane resin, they produce poor cosmetic compositions when the primary solvent is water. *See id.* Thus, Bhatt teaches away from the use of vinyl and acrylic copolymers, like those presently claimed or like the ones disclosed in Chutko, for inclusion in a primarily aqueous cosmetic composition without the additional inclusion of a polyurethane resin. *See M.P.E.P. § 2141.03(VI)* ("A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.") (citation omitted).

Further, Chutko discloses a carboxy addition polymer ("CAP") formed from ethyl acrylate, styrene, and acrylic or methacrylic acid monomers (*see* Chutko, col. 2, lines 2-4) to be used as film forming agents "capable of forming a tough coating, resistant to hydrolysis and other forms of chemical attack." *Id.* at col. 8, lines 3-10. Those CAPs, when combined with epoxy resin, tertiary amine, and a curing agent, are taught to form films on metal surfaces. *See id.* at col. 2, lines 14-22. In order for the composition disclosed in Chutko to form robust films, the composition must be *inter alia* "cured by heating for about 2 to about 20 seconds **in an oven at a temperature of about 230° C to about 300° C.**" *Id.* at col. 2, lines 27-29 (emphasis added). The required curing temperatures implicitly teaches one of skill in the art away from combining Chutko with Bhatt because of the inherent safety concerns.

Additionally, as discussed in Applicant's prior response, Chutko teaches that the disclosed composition forms tough coatings on metal surfaces. See Chutko, Abstract. In contrast, Bhatt is drawn to a hairstyling mousse composition. See Bhatt, col. 1, lines 5-15. Given the vast difference in the stated applications, Applicant respectfully submits that one of ordinary skill in the art would not look to the hairstyling mousse art for solutions to problems that may occur in the metal coating art. Moreover, the Examiner has still not provided any explanation as to **why** one of ordinary skill in the art would combine references from such divergent areas of technology, much less **why** they would enjoy a reasonable expectation of success in making such a combination.

Chutko also never discloses or suggests that the CAP by itself, without the additional components of resin, tertiary amine, and curing agent, would be successful as a film forming agent on any substrate. This is particularly important in light of the fact that Bhatt teaches away from the use of vinyl and acrylic copolymers in primarily aqueous compositions for hair cosmetics. Bhatt teaches away from the use of the CAPs disclosed in Chutko in cosmetic compositions, and Chutko does nothing to rebut that teaching.

Considering the implicit and explicit teaching away from the combination of Chutko and Bhatt and the significant differences between the Chutko composition and that of the present claims, a person of ordinary skill in the art would not have been motivated to combine Chutko with Bhatt as suggested by the Examiner, nor would one have expected success from combining the references.

Equally non-obvious is an attempt, as suggested by the Examiner, to create the presently claimed compositions by relying on Matyjaszewski to allegedly cure the

deficiencies of Bhatt and Chutko. Chutko teaches the synthesis of copolymers via conventional polymerization methods. *See* Chutko, col. 4, lines 35-36. Matyjaszewski, on the other hand, uses an atom transfer radical polymerization ("ATRP") method, which gives greater control over polymer composition, topology and microstructure. *See* Matyjaszewski, col. 1, lines 14-43. Specifically, Matyjaszewski describes, for the first time, synthesis of gradient copolymers. *See id.* at col. 29, lines 47-65. Because of the uniquely controlled structure and composition of these gradient copolymers, they "are expected to have very unique thermal properties (e.g., glass transition temperatures and/or melting points). They may also exhibit unprecedented phase separation and uncommon mechanical behavior." *See id.* at col. 29, lines 29-39.

The Examiner, however, points to nothing in the prior art that would suggest that combining the teachings of Chutko with those of Matyjaszewski to create a new copolymer, predicted to have unique thermal properties and uncommon mechanical behavior, would lead to a copolymer that acts as a film forming agent. Even if assuming, *arguendo*, one of skill in the art at the time of the invention believed that the CAP of Chutko alone would make a good film forming agent, there is no reason one would assume that a different copolymer, that is predicted to have fundamentally different physical properties, would also make a good film forming agent.

For at least the foregoing reasons Bhatt, Chutko, and Matyjaszewski, alone or in combination, do not teach or suggest the compositions of claims 1-40, 46, 63-65, 80-86, and 90-91. Accordingly, Applicants respectfully submit that the rejection of these claims is improper and that it should be withdrawn.

IV. Conclusion

In view of the foregoing remarks, Applicant respectfully requests reconsideration of this application and the timely allowance of the pending claims.

If the Examiner believes a telephone conference could be useful in resolving any outstanding issues, she is respectfully invited to contact Applicant's undersigned counsel at (202) 408-4152.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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Dated: November 20, 2008

By: 
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Attachment: Copy of Submission of English Language Translation of Provisional Application Under 37 C.F.R. § 1.52(d)(2) in provisional Application No. 60/459,259